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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,622	10/29/2003	Jukka K. Nurminen	4208-4152US1	7308

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EXAMINER	
RUSSELL, WANDA Z	
ART UNIT	**PAPER NUMBER**
2616	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/697,622	NURMINEN ET AL.	
	Examiner	Art Unit	
	Wanda Z. Russell	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper.No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. **Claims 1-68** provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-68 of copending Application No. 10/674679. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claims 1-68 in present application are identical to claims 1-68 in ~~10/697,622~~. 10/674,679

Specification

3. The disclosure is objected to because of the following informalities:

The title seems missing "in" after the word "handling".

Appropriate correction is required.

Claim Objections

4. **Claims 30, 64, and 66** are objected to because of the following informalities:

For claim 30, it may dependent to claim 26, based on the context of adjacent claims, rather than 3.

For claim 64, it may dependent to claim 60, based on the context of adjacent claims, rather than 37.

For claim 66, it may dependent to claim 60, based on the context of adjacent claims, rather than 61.

The examiner believes it is a typo. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-10, 13-14; 15-23; 24-26, 29, 31-34; 35-44, 47-48; 49-57; and 58-60, 63, 65-68** are rejected under 35 U.S.C. 102(e) as being anticipated by Bommareddy et al. (U.S. Patent 6,779,039 B1).

For **claim 1**, Bommareddy et al. teach a method for cluster management (col. 2, line 20) in a network environment (col. 2, line 21), comprising:

receiving (monitor, col. 3, line 19 & lines 18-20) one or more traffic measurements (operational health of the routers, col. 3, line 19) from one or more nodes (service providers, col. 2, line 59) associated with one or more clusters (col. 2, lines 58-50) in said network environment;

determining (dictate, col. 4, line 56) in accordance with the received traffic measurements (demand patterns, col. 4, line 56), one or more reclustering operations (manage many different clusters, col. 4, line 54) to be performed in said network environment (col. 4, lines 54-56); and

dispatching (migrate, col. 4, line 55 & lines 54-56) data to realize said reclustering.

For **claim 2**, Bommareddy et al. teach the method of claim 1, wherein said network environment is a peer-to-peer environment (col. 2, line 14).

For **claim 3**, Bommareddy et al. teach the method of claim 1, wherein said reclustering operations comprise creation of a new cluster (different clusters, col. 4, line 54).

For **claim 4**, Bommareddy et al. teach the method of claim 1, wherein said reclustering operations comprise elimination of one of said clusters (from one to another, col. 4, line 56).

For **claim 5**, Bommareddy et al. teach the method of claim 1, wherein said reclustering operations comprise transfer of one or more of said nodes among between one or more of said clusters (migrate, col. 4, lines 54-56, and ISPs, col. 2, lines 58-60).

For **claim 6**, Bommareddy et al. teach the method of claim 1, wherein said traffic measurements are constantly taken (continually monitors, col. 3, line 19).

For **claim 7**, Bommareddy et al. teach the method of claim 1, wherein said traffic measurements are taken in response to a request (col. 2, line 32) for said measurements (col. 2, lines 31-35).

For **claim 8**, Bommareddy et al. teach the method of claim 7, wherein said measurements are taken for a specified period of time (periodically, col. 7, line 45).

For **claim 9**, Bommareddy et al. teach the method of claim 1, wherein said traffic measurements comprise measurements corresponding to node index updates (index, col. 4, last line, and col. 3, last line – col. 4, line 3).

For **claim 10**, Bommareddy et al. teach the method of claim 1, wherein said traffic measurements comprise measurements corresponding to entity index updates (index, col. 4, last line, and col. 3, last line – col. 4, line 3).

For **claim 13**, Bommareddy et al. teach the method of claim 1, wherein a new cluster is created in response to one or more of said traffic measurements rising above a specified level (demand patterns, col. 4, line 56).

For **claim 14**, Bommareddy et al. teach the method of claim 1, wherein one of said clusters is eliminated in response to one or more of said traffic measurements falling below a specified level (demand patterns, col. 4, line 56).

For **claim 15**, Bommareddy et al. teach a method for cluster management in a network environment, comprising:

receiving (responds, col. 3, line 50) a request from a node to change affiliation (servers, col. 3, line 51) with said network environment;

determining (dictate, col. 4, line 56 & lines 54-56) if the affiliation change would result in an integer-squared number of nodes being affiliated with said environment; and

dispatching (migrate, col. 4, line 55 & lines 54-56) data to realize reclustering in said environment in the case where said determining yields an affirmative result.

For **claim 16**, Bommareddy et al. teach the method of claim 15, wherein said network environment is a peer-to-peer environment (col. 2, line 14).

For **claim 17**, Bommareddy et al. teach the method of claim 15, wherein it is determined if the affiliation change would result in said integer-squared number of nodes being registered in said network environment (dictate, col. 4, line 56 & lines 54-56).

For **claim 18**, Bommareddy et al. teach the method of claim 15, wherein it is determined if the affiliation change would result in said integer-squared number of nodes being active in said network environment (dictate, col. 4, line 56 & lines 54-56).

For **claim 19**, Bommareddy et al. teach the method of claim 15, wherein the affiliation change is registration (configuration, col. 2, last line).

For **claim 20**, Bommareddy et al. teach the method of claim 15, wherein the affiliation change is entry into active state (col. 2, last line).

For **claim 21**, Bommareddy et al. teach the method of claim 15, wherein said reclustering comprises establishment of a new cluster in said network environment (different clusters, col. 4, line 54).

For **claim 22**, Bommareddy et al. teach the method of claim 15, wherein said reclustering comprises elimination of an existing cluster in said network environment (from one to another, col. 4, line 56).

For **claim 23**, Bommareddy et al. teach the method of claim 15, wherein said reclustering comprises transfer of one or more nodes from a first cluster in said network

environment to a second cluster in said network environment (migrate, col. 4, line 55 & lines 54-56).

For **claim 24**, Bommareddy et al. teach a method for communications in a network environment (col. 2, line 21), comprising:

receiving (col. 2, line 31) data (traffic, col. 3, line 55) at a node in said network environment, wherein said node is associated with a cluster (col. 2, line 40) in said network environment;

selecting (col. 4, line 15) from identification numbers (IP header, col. 4, line 15) associated with nodes in said network environment an identification number closest in value, in view of a specified polarity, to an identification number (IP address, col. 3, line 17) associated with said node; and

dispatching (send, col. 3, line 54) said data to a node associated with the selected identification number (col. 3, lines 53-56).

For **claim 25**, Bommareddy et al. teach the method of claim 24, wherein said network environment is a peer-to-peer environment (col. 2, line 14).

For **claim 26**, Bommareddy et al. teach the method of claim 24, wherein the identification number associated with the node that received said data and the selected identification number are node identification numbers (IP address, col. 3, line 17), and said node associated with the selected identification number is associated with said cluster.

For **claim 29**, Bommareddy et al. teach the method of claim 26, wherein said data corresponds to an entity index update (index, col. 4, last line, and col. 3, last line – col. 4, line 3).

For **claim 31**, Bommareddy et al. teach the method of claim 26, wherein said data corresponds to a node index update (index, col. 4, last line, and col. 3, last line – col. 4, line 3).

For **claim 32**, Bommareddy et al. teach the method of claim 27, wherein said data corresponds to a node index update (index, col. 4, last line, and col. 3, last line – col. 4, line 3).

For **claim 33**, Bommareddy et al. teach the method of claim 24, wherein said specified polarity indicates that the selected identification number be higher in value than the identification number associated with the node that received said data (demand patterns, col. 4, line 56).

For **claim 34**, Bommareddy et al. teach the method of claim 24, wherein said specified polarity indicates that the selected identification number be lower in value than the identification number associated with the node that received said data (demand patterns, col. 4, line 56).

For **claims 35-44**, they are system (Title) claims corresponding to method claims 1-10, and system has memories (col. 1, line 56), therefore they are rejected for the same reason above.

For **claims 47 and 48**, they are system (Title) claims corresponding to method claims 13 and 14, therefore they are rejected for the same reason above.

For **claims 49-57**, they are system (Title) claims corresponding to method claims 15-23, therefore they are rejected for the same reason above.

For **claims 58-60**, they are system (Title) claims corresponding to method claims 24-26, therefore they are rejected for the same reason above.

For **claim 63**, it is system (Title) claim corresponding to method claim 29, therefore it is rejected for the same reason above.

For **claims 65-68**, they are system (Title) claims corresponding to method claims 31-34, therefore they are rejected for the same reason above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 11, 12, 30, 45, 46, and 64** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bommareddy et al. (U.S. Patent 6,779,039 B1), in view of Schuetze et al. (Pub No. US 2003/0110181 A1).

For **claim 11**, Bommareddy et al. substantially teach everything claimed as applied above (see claim 1).

However, Bommareddy et al. fail to specifically teach that traffic measurements comprise measurements corresponding to entity queries.

Schuetze et al. teach the method of claim 1, wherein said traffic measurements comprise measurements corresponding to entity queries (0159], line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bommareddy et al. with Schuetze et al. to obtain the invention as specified, for providing added functionality that permits users to augment queries.

For **claim 12**, Bommareddy et al. substantially teach everything claimed as applied above (see claim 1).

However, Bommareddy et al. fail to specifically teach determination of ideal cluster size.

Schuetze et al. teach the method of claim 1, wherein determining comprises determination of ideal cluster size (0163], line 4, and [0164], last 4 lines).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bommareddy et al. with Schuetze et al. to obtain the invention as specified, for providing expand operation.

For **claim 30**, Bommareddy et al. substantially teach everything claimed as applied above (see claim 24).

However, Bommareddy et al. fail to specifically teach that traffic measurements comprise measurements corresponding to entity queries.

Schuetze et al. teach the method of claim 26 (see claim objection above), wherein said traffic measurements comprise measurements corresponding to entity queries (0159], line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bommareddy et al. with Schuetze et al. to

obtain the invention as specified, for providing added functionality that permits users to augment queries.

For **claims 45 and 46**, they are system (Title) claims corresponding to method claims 11 and 12, therefore they are rejected for the same reason above.

For **claim 64**, it is system (Title) claim corresponding to method claim 30, therefore it is rejected for the same reason above.

9. **Claims 27, 28, 61, and 62** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bommareddy et al. (U.S. Patent 6,779,039 B1), in view of Garcia-Luna-Aceves et al. (Pub No. US 2002/0129086 A1).

For **claim 27**, Bommareddy et al. substantially teach everything claimed as applied above (see claim 24).

However, Bommareddy et al. fail to specifically teach the identification number associated with the node that received said data and the selected identification number are cluster identification numbers, and node associated with the selected identification number is associated with a cluster other than the cluster with which the node that received said data is associated.

Garcia-Luna-Aceves et al. teach the method of claim 24, wherein the identification number ([0037], lines 5-6) associated with the node that received said data and the selected identification number are cluster identification numbers, and node associated with the selected identification number is associated with a cluster other than the cluster with which the node that received said data is associated ([0037], lines 4-7).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bommareddy et al. with Garcia-Luna-Aceves et al. to obtain the invention as specified, for lookup of a routing-table entry based on cluster number and destination address.

For **claim 28**, Bommareddy et al. substantially teach everything claimed as applied above (see claim 24).

However, Bommareddy et al. fail to specifically teach said node associated with the selected identification number is selected randomly from a plurality of nodes associated with the selected identification number.

Garcia-Luna-Aceves et al. teach the method of claim 27, wherein said node associated with the selected identification number is selected randomly from a plurality of nodes associated with the selected identification number (maximum possible nodes, [0115], line 10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bommareddy et al. with Garcia-Luna-Aceves et al. to obtain the invention as specified, for expediting the lookup time at the first hop router and also at the second and successive hop routers receiving the packets.

For **claims 61 and 62**, they are system (Title) claims corresponding to method claims 27 and 28, therefore they are rejected for the same reason above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Z. Russell whose telephone number is (571) 270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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